(FB). The delineation of OARs- bladder wall (BW), rectal wall (RW), sigmoid colon & bowel (peritoneal cavity) was done in both scans by a radiation oncologist. Both conventional & CT based planning were performed on PLATO brachytherapy planning system v14.3.7 (Nucletron, The Netherlands). Dose volume histograms of OARs wall were calculated. The volume doses were defined either as minimum dose value in a cm^3 volume receiving the highest dose ($D_{0.1cc}$, $D_{0.2cc}$, $D_{0.5cc}$, D_{1cc}, D_{2cc}, D_{5cc}, D_{10cc}) or as percentage of volume of OAR receiving a dose ($D_{25\%}$, $D_{50\%}$, $D_{100\%}$). The significance of differences was compared using two sided paired *t* test.
Results: The mean BW volume in EB & FB was 26.2cc (range 17.4-40.4) & 44.8cc (range 38.5-49.2) respectively. When bladder was distended the mean difference in $D_{0.1cc-10cc}$ values for BW & RW increased marginally but were not statistically significant. However $D_{0.1cc-10cc}$ values for bowel dose (cGy) decreased significantly (0.1 cc. 698.9 to 492.9 p=0.037, 0.2cc 666.4 to 465.7 p= 0.007, 0.5cc 617.7 to 427.1 p=0.006, 1 cc 574.4 to 389.8 p=0.005, 2cc 521.4 to 347.9 p=0.003, 5cc 446.4 to 286.7 p=0.002). In contrast the mean $D_{25\%}$, $D_{50\%}$, $D_{100\%}$ values for both BW (411.3 vs 244.7, 254.6 vs 123.9, 78.6 vs 26.2cGy) & bowel decreased (135.3 vs 81.2, 82.5 vs 51.6, 11.1 vs 4.8cGy) when compared with EB &FB respectively which was significant at p=0.000 for all parameters for both OARs but no significant difference was seen for RW & sigmoid colon doses.
Conclusions: Distension of bladder resulted in a significant reduction in bowel during image based ICBT without any significant increase in the dose to bladder wall, rectal wall and sigmoid colon and can be explored in clinical settings.

PO-0736
Undetected HPV DNA is associated with recurrence after radiation therapy for uterine cervical carcinoma.
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Purpose/Objective: The time course of human papillomavirus (HPV) DNA clearance was studied in patients with carcinoma of the cervix during follow-up after primary radical radiotherapy (RT). This study investigated the relationship between timing of HPV clearance and RT effectiveness.
Materials and Methods: Seventy-two consecutive patients who were treated with primary radical RT for cervical cancer were enrolled in the study. Samples for HPV DNA examination were taken before: a) treatment, b) every brachytherapy, and c) and every follow-up examination. The times when HPV DNA was undetected were analyzed for association with recurrence free survival.
Results: HPV DNA was not detected in 13 patients (18%) before RT. Of the 59 patients with HPV DNA detected before treatment, HPV DNA was not detected in 28% during treatment and in 72% after the treatment. Within six months after RT, HPV DNA was detected in 0% of all patients. Among the various time points analyzed, patients with no detectable HPV DNA before treatment were more accurate predictors of recurrence than patients with HPV DNA detected before RT.
Conclusions: In this study we showed the time course of HPV DNA clearance during follow-up of patients with carcinoma of the cervix treated with primary radical RT. The patients in whom HPV was not detected had the worst prognosis. Six months after RT, HPV DNA was detected in 0% of the patients that had shown HPV DNA during treatment. In previous reports, those patients with HPV persistence after treatment would be considered a high risk group needing more effective or additional treatment. This study adds additional information on the relationship between detectability of HPV and RT effectiveness.

PO-0737
Postoperative radiotherapy in endometrial cancer: the Lausanne experience in 201 consecutive patients
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Purpose/Objective: We aim to retrospectively review the outcome of patients treated for EC with PORT at a single center. The secondary goals were identification of prognostic factors, comparison of toxicity profiles between vaginal cuff brachytherapy (VB) alone or combined with pelvic external beam radiation therapy and VB (EBRT+VB), and comparison of severe bladder and intestinal late toxicity (≥ G3) between 2D-, 3D-, and IMRT-EBRT+VB. We also investigate the incidence of second cancers.
Materials and Methods: A series of 201 patients treated with PORT between 1999 and 2009. Patient's characteristics are summarized in table 1. Outcome, toxicity, and incidence of second cancers were confirmed by reviewing patient's charts. Overall survival (OS), locoregional control (LRC), disease-free survival (DFS), and cancer-specific survival (CSS) curves were computed, and subgroups were compared via lograng test. Cox proportional hazards modeling was performed to evaluate the effect of multiple variables.

Patient's characteristics	Percentages (%)
Median age 68 year-old	
Grade 1	32
Grade 2	43.5
Grade 3	24.5
Lymphovascular invasion	32.5
Stage (FIGO 1988)	
I A-B	28.85
IC	30.85
II	25.3
III-IVA	15

Results: At a median follow-up time of 5 years (range, 1-12), OS was 78% (95% CI: 72-84%), DFS 72% (95% CI: 65-79%), CSS 84% (95% CI: 79-89%), and LRC 84% (95% CI: 79-89%), In univariate analyses, significant prognostic factors for OS and DFS were age, grade, lymphovascular invasion (LVI), stage, cervical invasion, histology, and surgical lymphadenectomy. For CSS: histology type, cervical invasion, grade, stage, and presence of lymphovascular invasion. The use of brachytherapy was associated to better OS, DFS, and CSS in univariate analyses but its effect disappeared in multivariate analysis. In the multivariate analysis, independent factors influencing the outcome were age (OS, DFS), stage (OS, DFS, CSS), LVI (OS, DFS), grade (DFS, CSS), and lymphadenectomy (OS). By the end of follow-up, 13% of the patients developed severe GI or GU late toxicity, and the cumulative incidence of second cancers in the irradiated area was 16%. Five-year probability of severe (grade ≥ 3) toxicity was 0% for VB alone vs. 16% (95% CI: 9-23%) for EBRT+VB (p = 0.0008). By radiotherapy technique toxicity was: 0% for VB alone and 0% for IMRT+VB, 9% (95% CI: 1-17%) for 3D-EBRT+VB, and 22% (95% CI: 12-32%) for 2D-EBRT+VB, (p = 0.0009).
Conclusions: Local/locoregional recurrence rates remain low after surgery and PORT. The use of VB or EBRT+VB should be tailored to the surgical and pathologic features. Dependency between toxicity and radiotherapy technique is observed. VB alone or IMRT+VB have not provoked severe late toxicity. 2D-EBRT more than 3D-EBRT+VB was associated with increased severe toxicity. For patients with intermediate risk histopathologic features, VB alone seems to be sufficient. Comprehensive surgical staging with complete lympha-denectomy impacts the outcome in this retrospective series.

POSTER: CLINICAL TRACK: SARCOMA

PO-0738
Cpt1c depletion protects from tumour growth and increases energy expenditure in a mouse tumour model
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Purpose/Objective: Carnitine palmitoyltransferase 1C (Cpt1c) is a brain-specific metabolic enzyme that is involved in energy homeostasis and appetite regulation (Wolfgang et al. 2006). We further identified Cpt1c as a gene regulated by the p53 transcription factor and by the AMP-dependent kinase (AMPK) (Sanchez-Macedo et al., accepted in CDD), which helps tumor cells to survive under metabolic stress, i.e. glucose deprivation and hypoxia (Zaugg et al. 2011). To better understand the role of Cpt1c in tumorigenesis we need first to elucidate its physiological function, which is still unclear. We investigated the impact of loss of Cpt1c function in a mouse tumor model and analyzed the metabolic phenotype of a Cpt1c gene trap mouse.
Materials and Methods: We used $Nf1^{+/-}$:$p53^{+/-}$ mice as a tumor model. These *Nf1;p53* heterozygous mice develop sarcomas with high frequency. These mice were crossbred with mice depleted of Cpt1c ($Cpt1c^{gt/gt}$). The median survival rate of $Nf1^{+/-}$:$p53^{+/-}$:$Cpt1c^{gt/gt}$ mice was compared with $Nf1^{+/-}$:$p53^{+/-}$ mice, $Cpt1c^{gt/gt}$ mice and a *wild type* control (C57BL/6 strain). Survival of the mice was plotted using a